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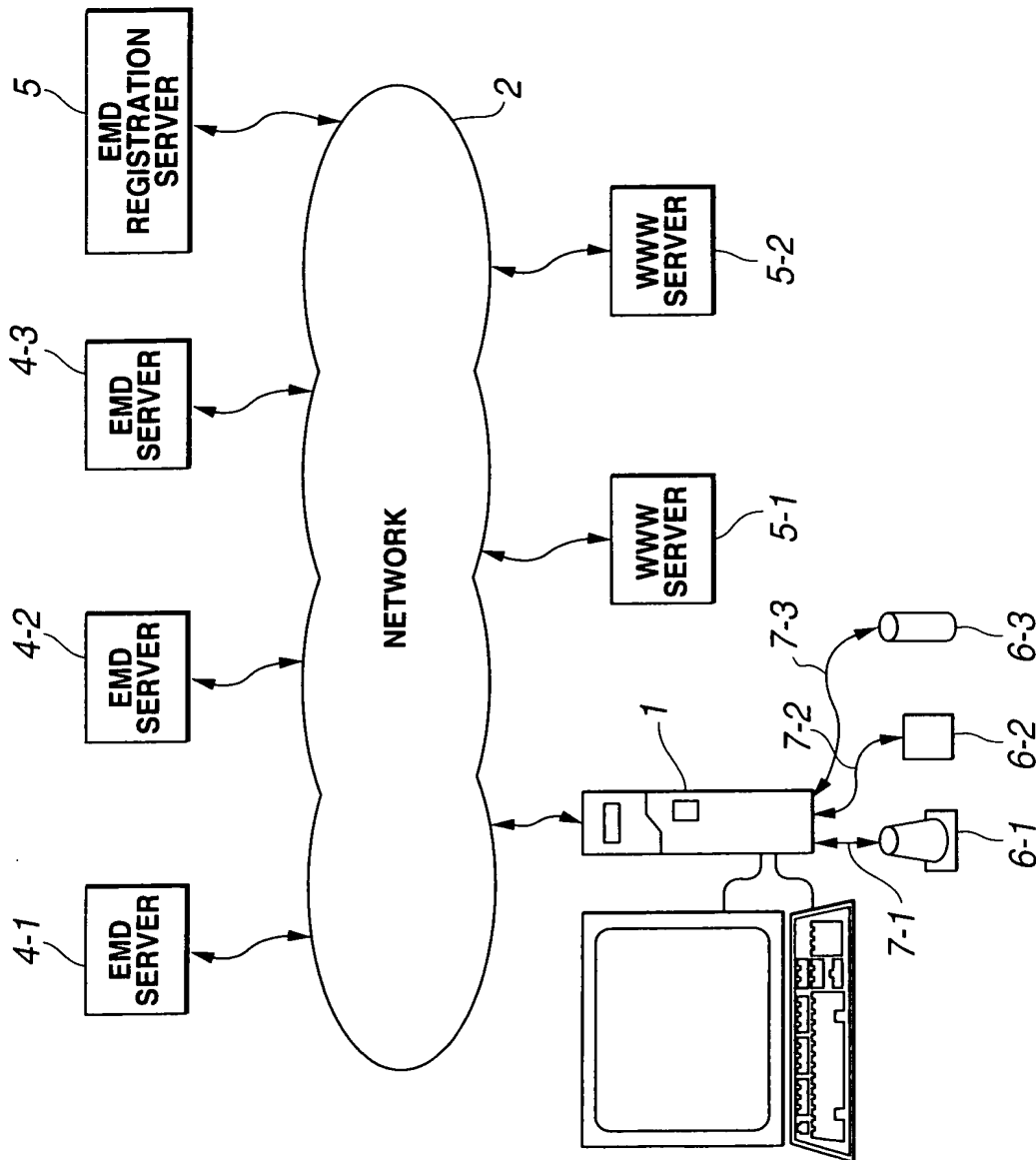


FIG.1

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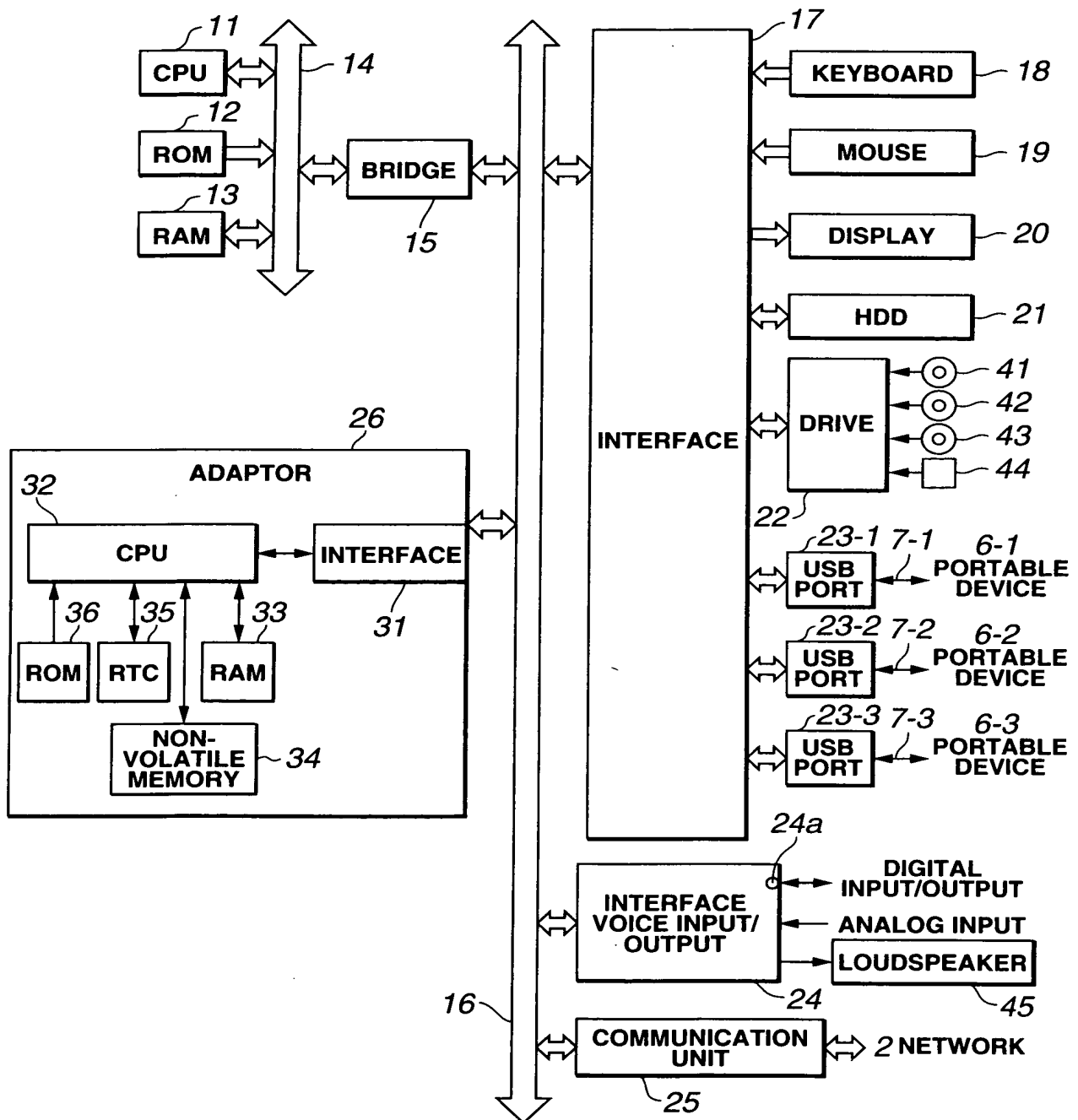


FIG.2

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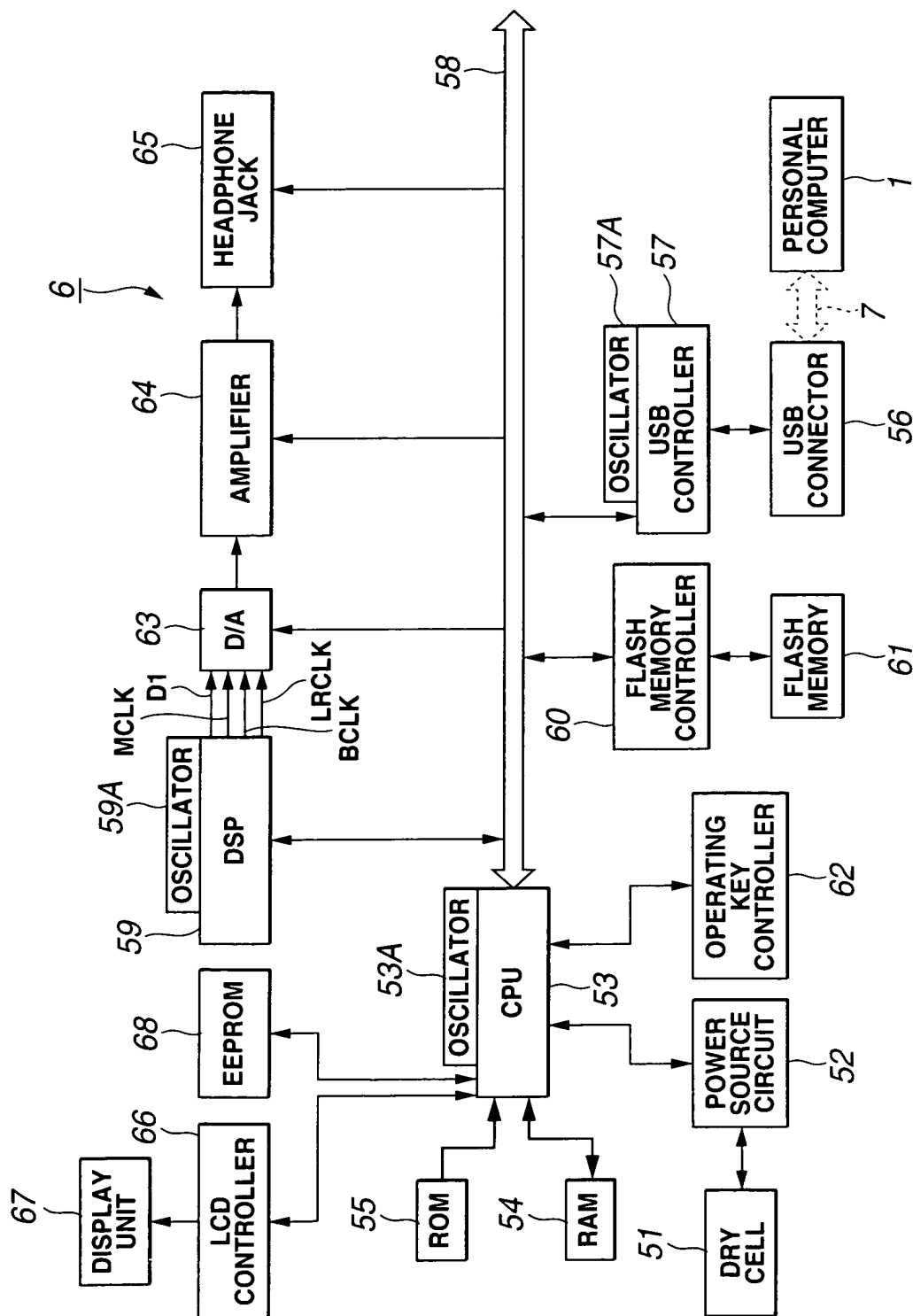


FIG. 3

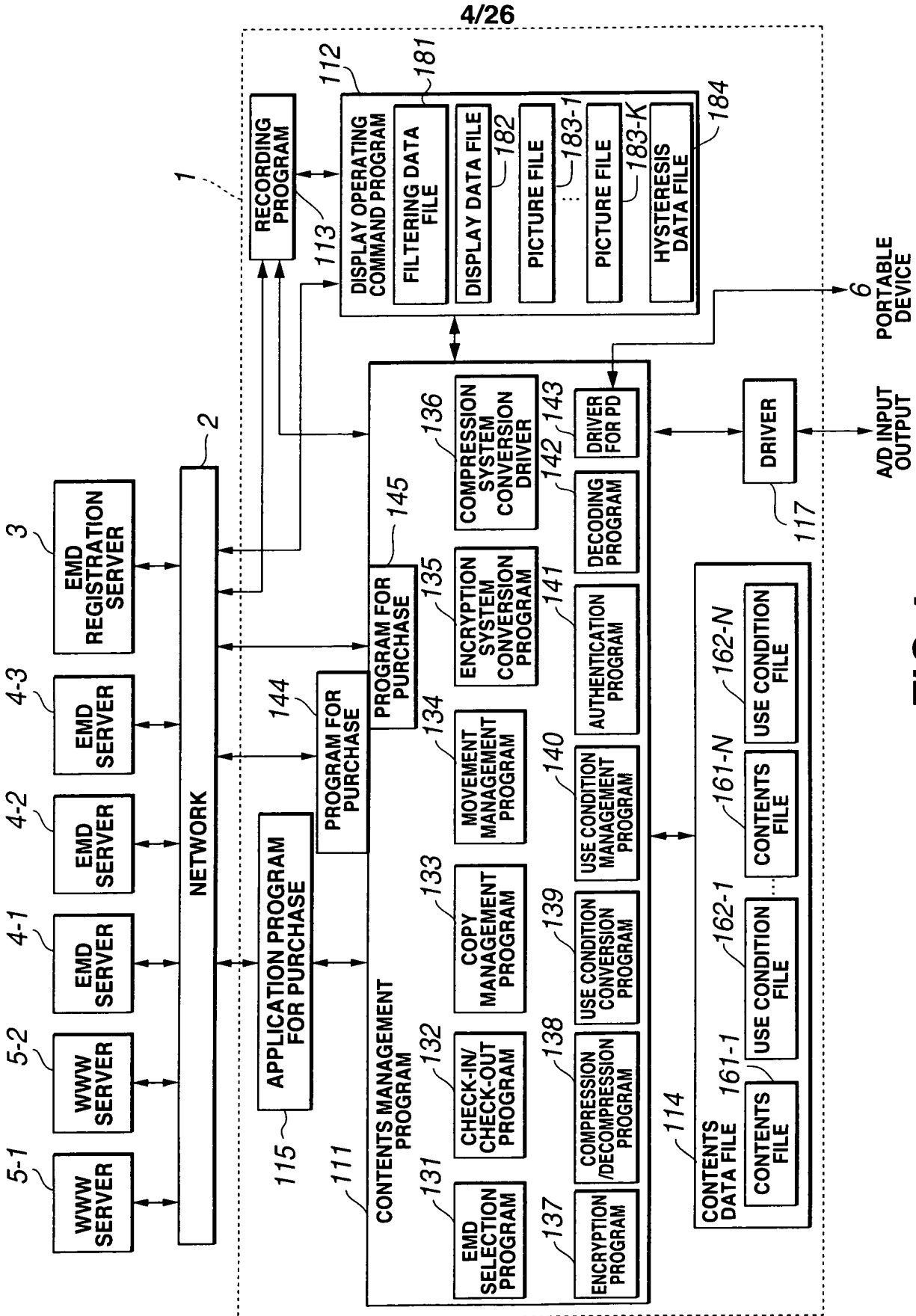
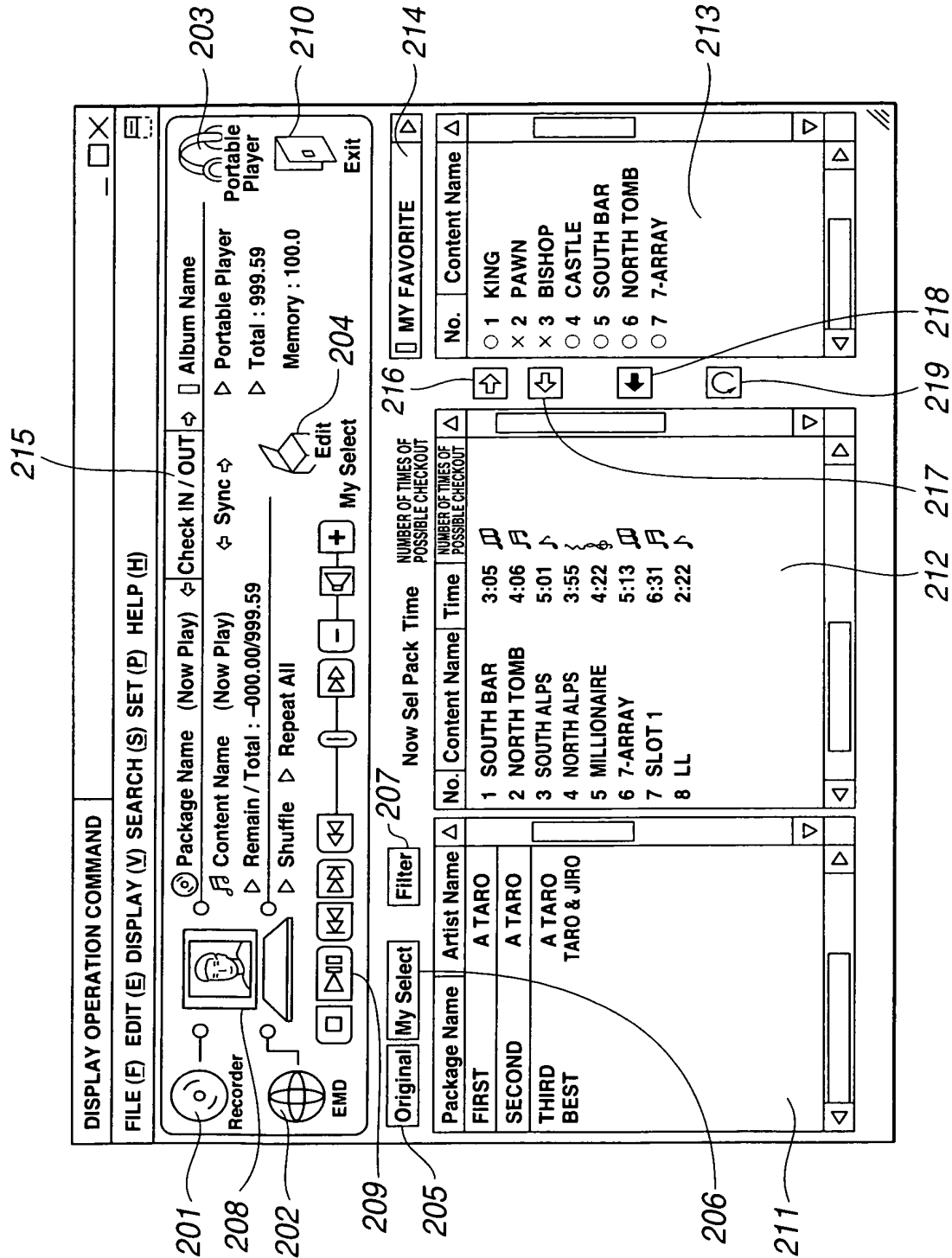


FIG.4

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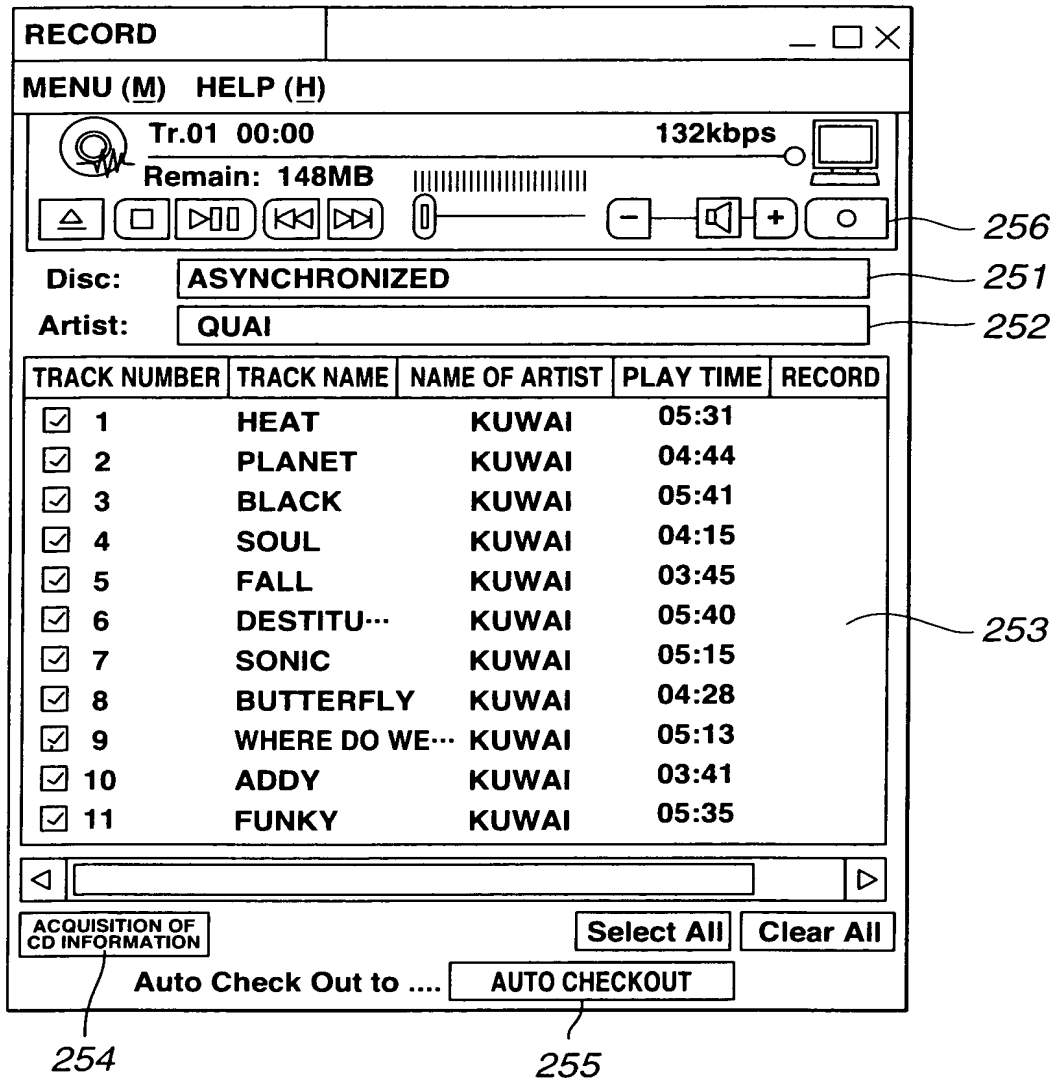


FIG.6

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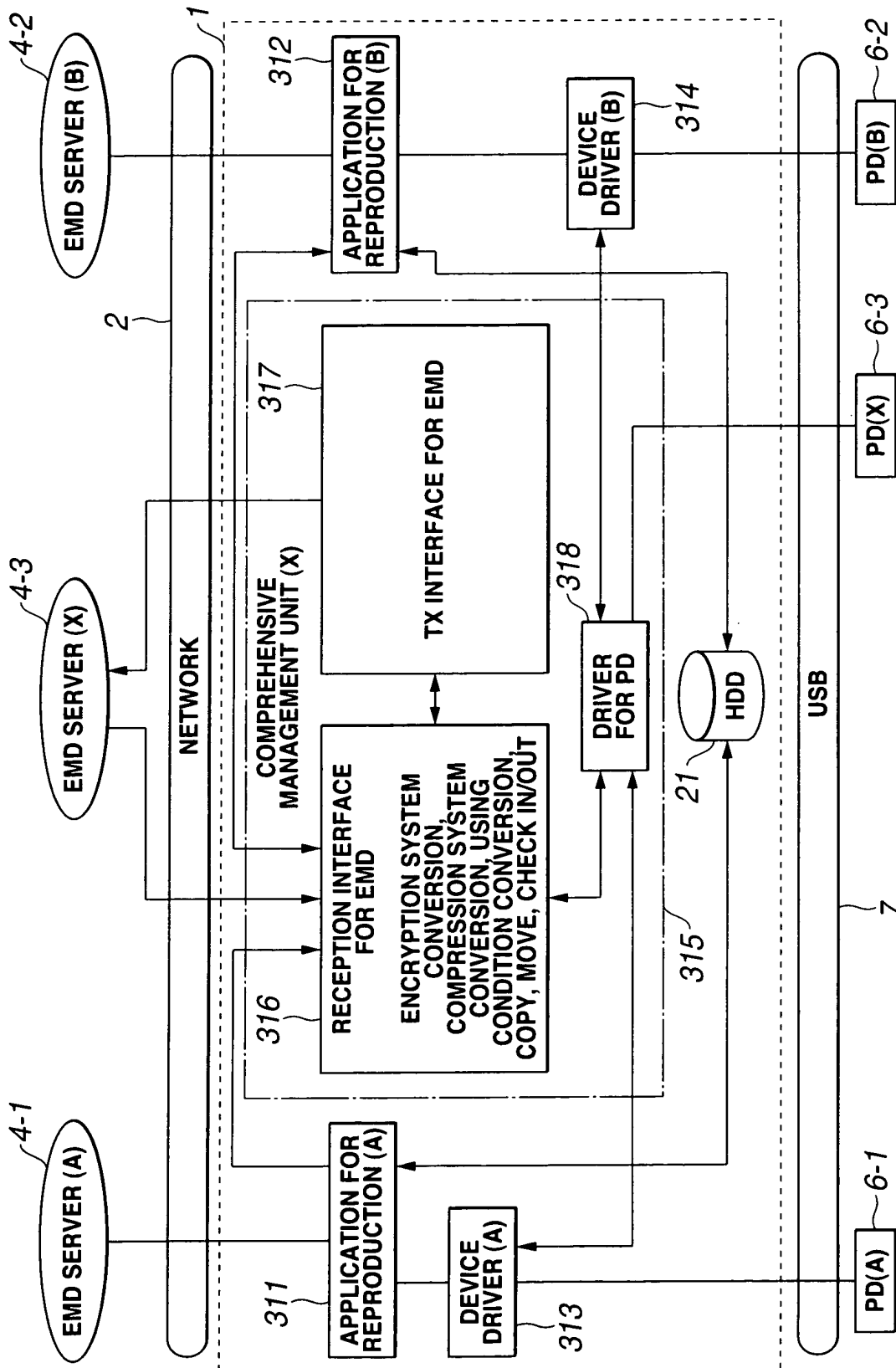


FIG.7

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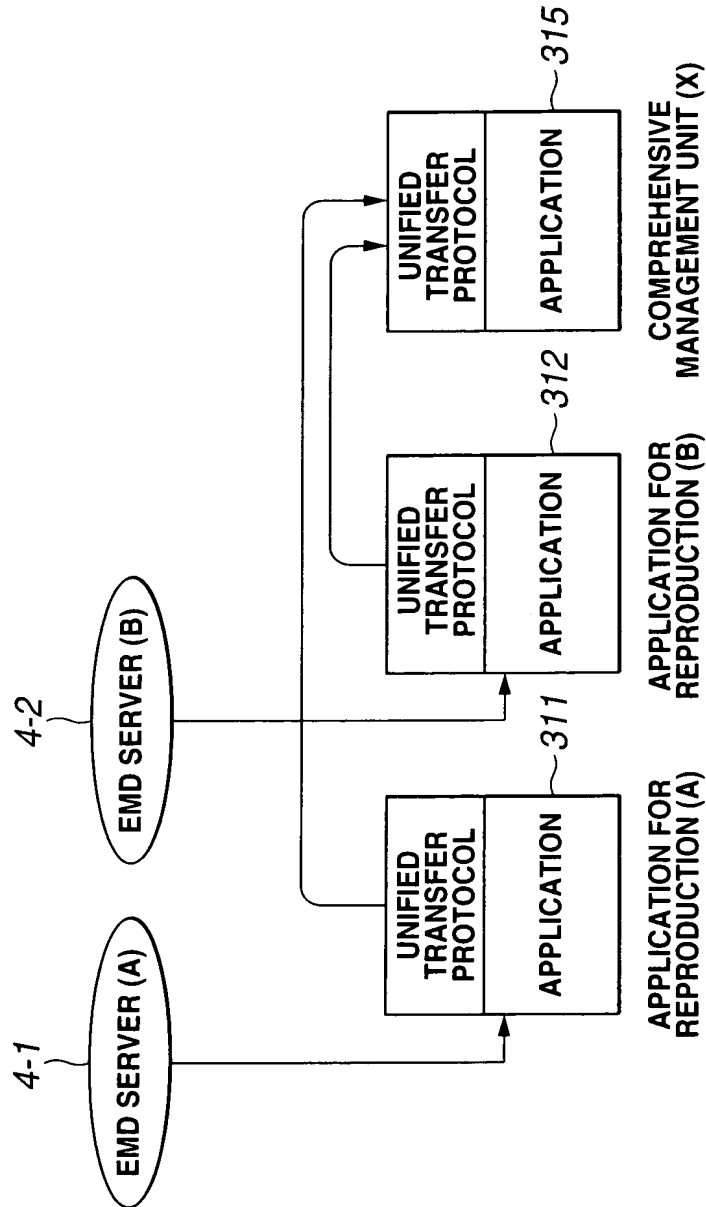


FIG. 8

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FIG.9A

POLICY	VALUE
from	99/10/25
to	99/11/24
pay/play	yes/10yen

FIG.9B

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USING CONDITION INFORMATION

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FIG.10

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$Sig_{K_E}^{-1}$ (Automaton)	343
Cert (K_E^1)	344

FIG.11

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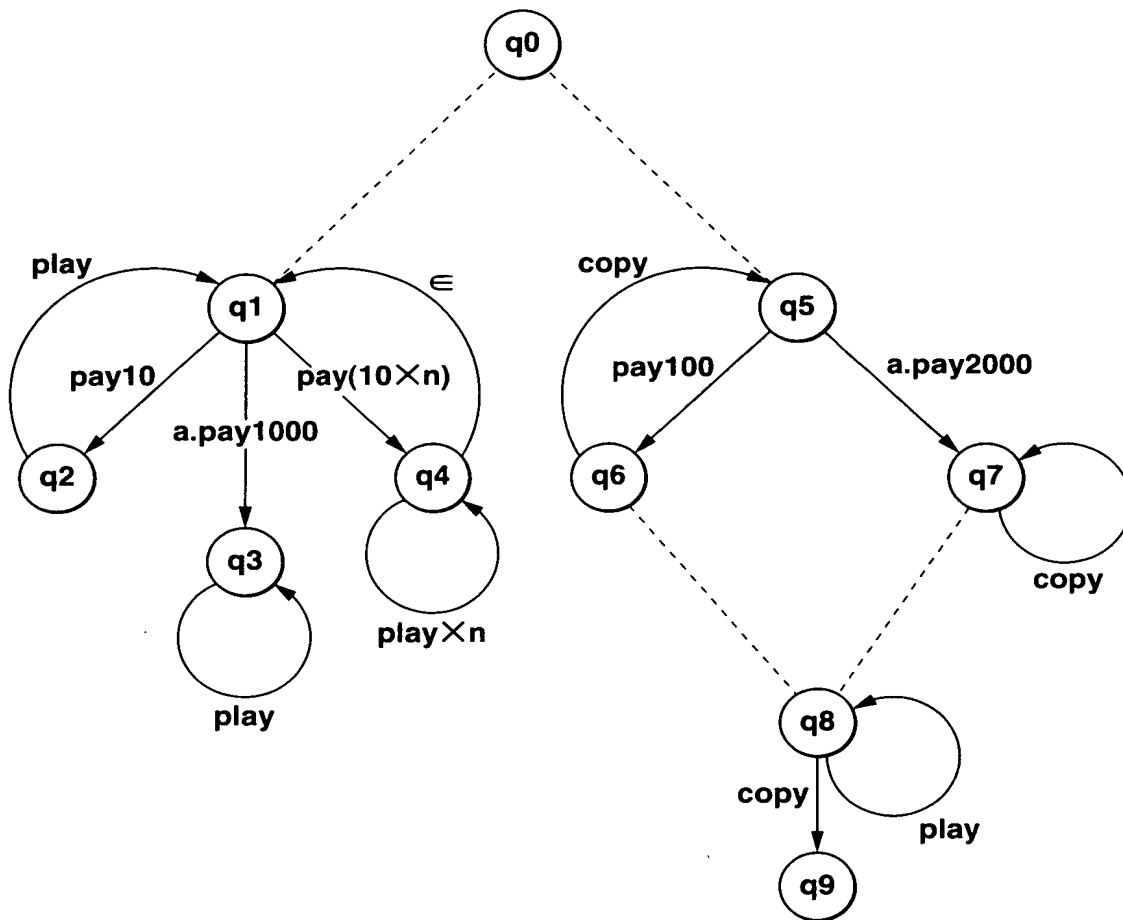


FIG.12

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$\langle q_1, \text{pay10}, q_2 \rangle$
 $\langle q_1, \text{a.pay1000}, q_3 \rangle$
 $\langle q_1, \text{pay}(10 \times n), q_4 \rangle$
 $\langle q_2, \text{play}, q_1 \rangle$
 $\langle q_3, \text{play}, q_3 \rangle$
 $\langle q_4, \text{play} \times n, q_4 \rangle$
 $\langle q_4, \epsilon, q_1 \rangle$
 $\langle q_5, \text{pay100}, q_6 \rangle$
 $\langle q_5, \text{a.pay2000}, q_7 \rangle$
 $\langle q_6, \text{copy}, q_5 \rangle$
 $\langle q_7, \text{copy}, q_7 \rangle$
 $\langle q_8, \text{play}, q_8 \rangle$
 $\langle q_8, \text{copy}, q_9 \rangle$

FIG.13

Entity ID	345
Content ID	346
Automaton Version	347
Variables	348
Tuples	349
Automaton Version	347
Variables	348
Tuples	349
⋮	

FIG.14

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<!ENTITY% event" (

play	1
copy	1
pay-for-play	1
pay-for-copy	1
pay-for-album-play	1
pay-for-album-copy	1
from	1
to	1
null	1

)">

<!ENTITY% command" (

drop	1
dup	1
swap	1
add	1
subtract	1
multiply	1
divide	1
remainder	1
upper	1
lower	1
equal	1
less	1
greater	1
less-equal	1
greater-equal	1
and	1
or	1
not	1
bit-and	1
bit-or	1
bit-xor	1
bit-not	1

)">

FIG.15

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Content playable from 1999/9/1

<automaton>

<!--This usage rule system has one Right Unit.
Initial state is q1- ->

<Initial-right-unit state="q1"/>

<node state = "q1">

<!--If after 1999/9/1, transfer to q2- ->

<rule event="from" next-state="q2">

<arguments>

<integer value="time:19990901"/>

</arguments>

</rule>

</node>

<node state = "q2">

<!-- - playable - ->

<rule event="play" next-state="q2"/>

</node>

</automaton>

FIG.16

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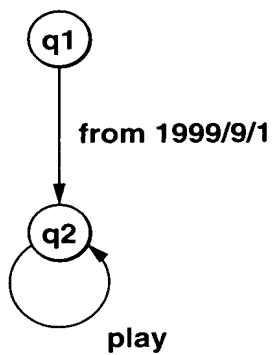


FIG.17

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Content playable until 1999/10/31

<automaton>

<!-- This Usage Rule System has one Right Unit.

Initial state is q2 -->

<Initial-right-unit state="q2"/>

<node state = "q2">

<!-- If after 1999/10/31, transfer to end -->

<rule event="to" next-state="end">

<arguments>

<integer value="time:19991031"/>

</arguments>

</rule>

<!-- playable -->

<rule event="play" next-state="q2">

</rule>

</node>

<!-- Unusable state -->

<node state = "end"/>

</automaton>

FIG.18

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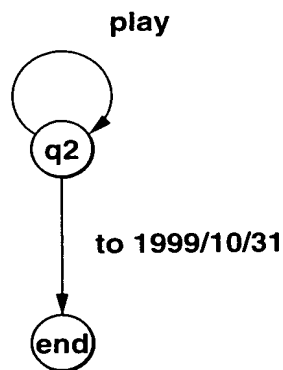


FIG.19

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Content playable 16 times from 1999/9/1 to 1999/10/31

<automaton>

```
<!--Define counter variables for playable numbers. Initial value is 16 -->
<define-variable name="count" initial-value="16" />
```

```
<!-- This Usage Rule System has one Right Unit. Initial state is q1 -->
<initial-right-unit state="q1" />
```

```
<node state="q1">
  <!--From 1999/9/1 transfer to q2 -->
  <rule event="from" next-state="q2">
    <arguments>
      <integer value="time:19990901" />
    </arguments>
  </rule>
</node>
```

```
<node state="q2">
  <!--From 1999/10/31, transfer to end -->
  <rule event="to" next-state="end">
    <arguments>
      <integer value="time:19991031" />
    </arguments>
  </rule>
```

```
<rule event="play" next-state="q2">
  <!--Playable only for "count" numbers -->
  <arguments>
    <variable name="count" />
    <command name="load" />
  </arguments>
  <!--If this rule is selected, the "count" number decrements by one-->
  <action>
    <variable name="count" />
    <command name="load" />
    <integer value="1" />
    <command name="subtract" />
    <variable name="count" />
    <command name="store" />
  </action>
</rule>
</node>
```

```
<!--Unusable state-->
<node state="end" />
```

</automaton>

FIG.20

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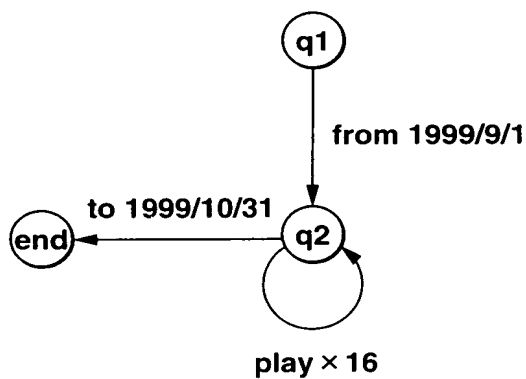


FIG.21

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Content playable less than and/or equal to 16 times

<automaton>

<!--Define valuable counter for playable numbers. Initial value is 16 -->
<define-variable name="count" initial-value="16" />

<!-- Usage Rule System has one Right Unit. Initial state is q2 -->
<initial-right-unit state="q1" />

<node state="q2">
 <rule event="play" next-state="q2">
 <!--"Count" number of times playable -->
 <arguments>
 <variable name="count" />
 <command name="load" />
 </arguments>
 <!--If this rule is selected. "count" number decrements by one-->
 <action>
 <variable name="count" />
 <command name="load" />
 <integer value="1" />
 <command name="subtract" />
 <variable name="count" />
 <command name="store" />
 </action>
 </rule>
</node>

</automaton>

FIG.22

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Parameters	351
MAC_{K_C} (Parameters)	352
$Sig_{K_E}^{-1}$ (Parameters)	353
Cert (K_E^1)	354

FIG.23

Parameters	351
EntityID	355
MAC_{K_C} (Parameters)	352
$Sig_{K_E}^{-1}$ (Parameters)	353
Cert (K_E^1)	354

FIG.24

Entity ID	356
Contents ID	357
Contents	358

FIG.25

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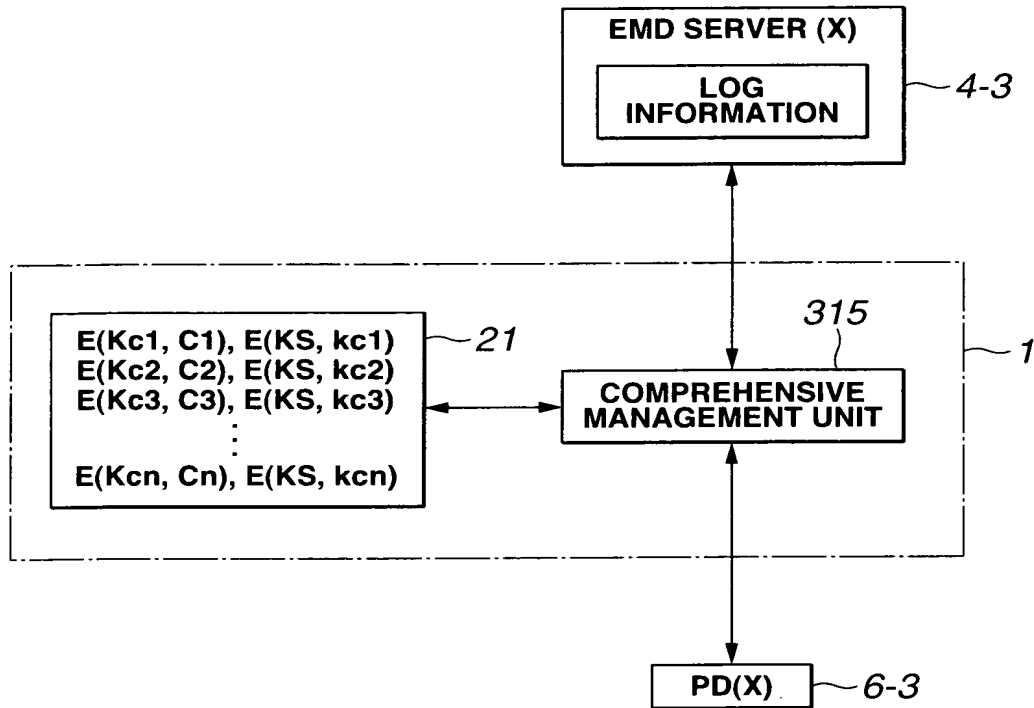


FIG.26

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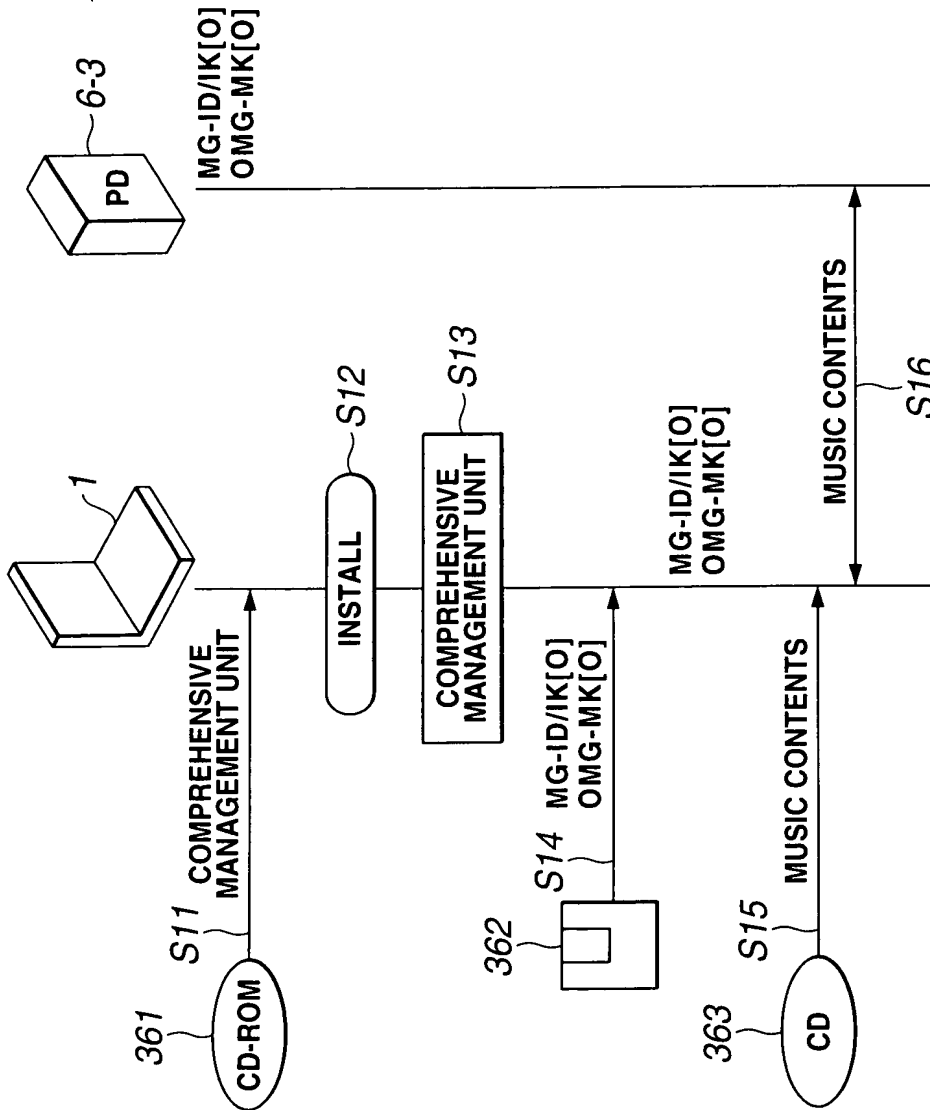


FIG.27

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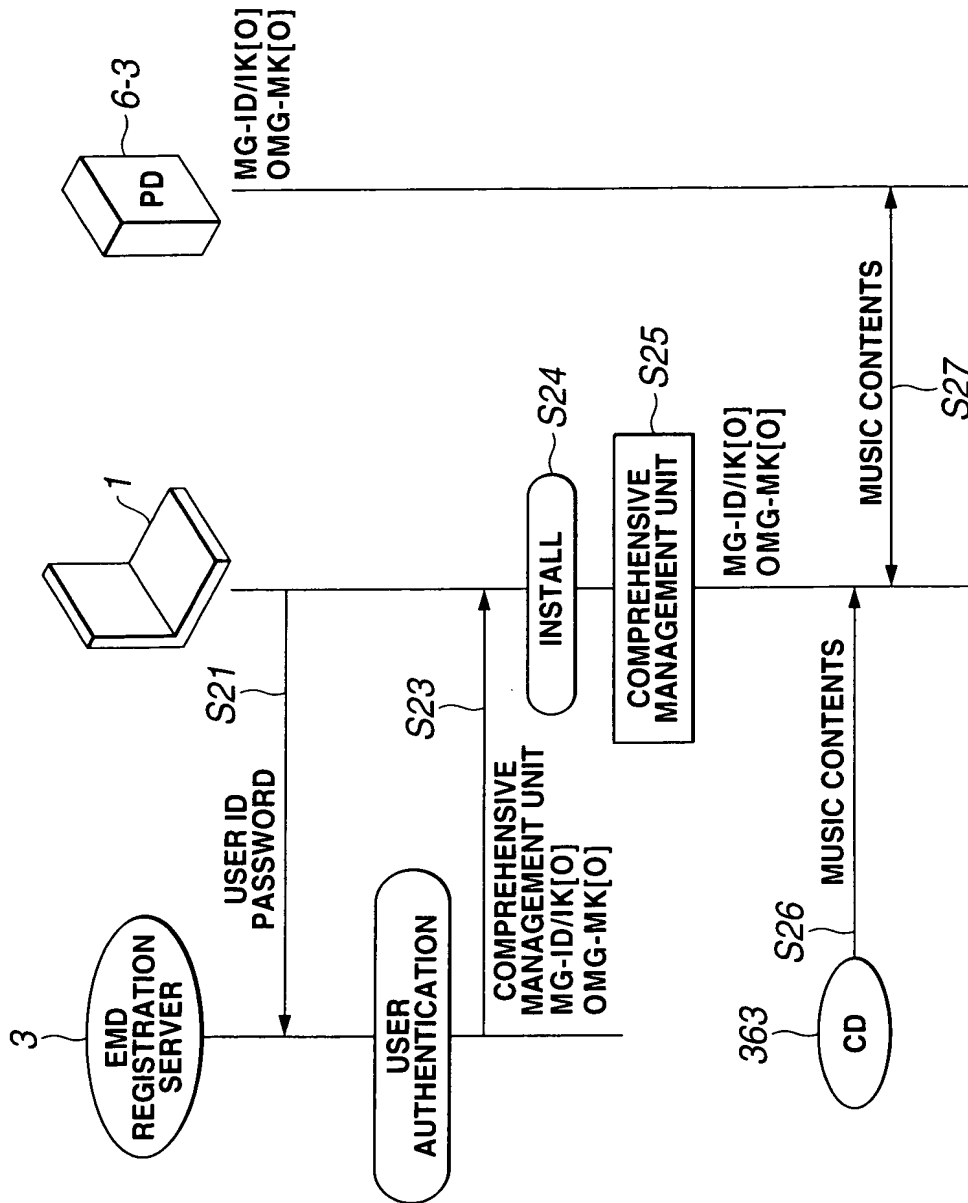


FIG.28

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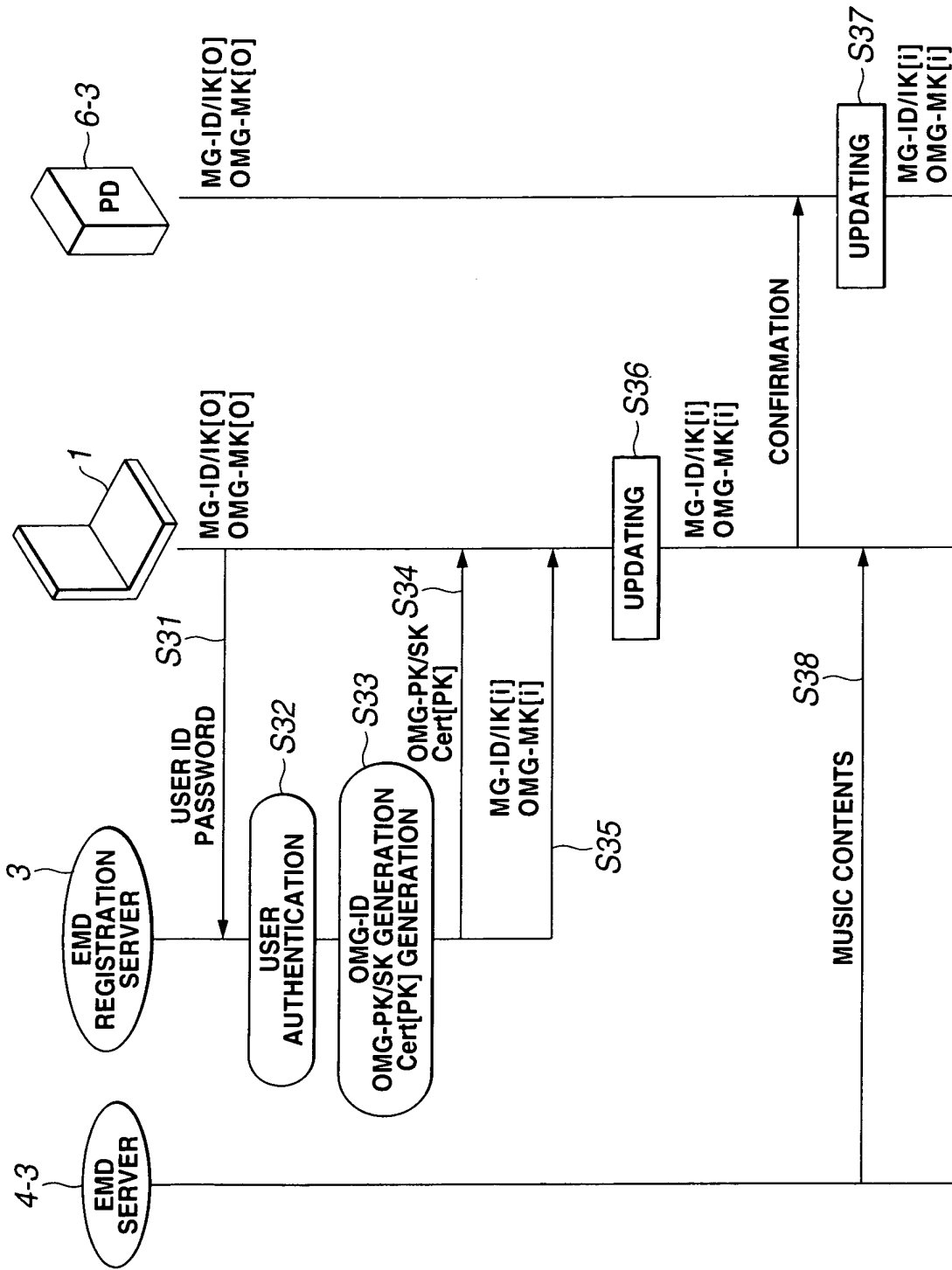


FIG.29

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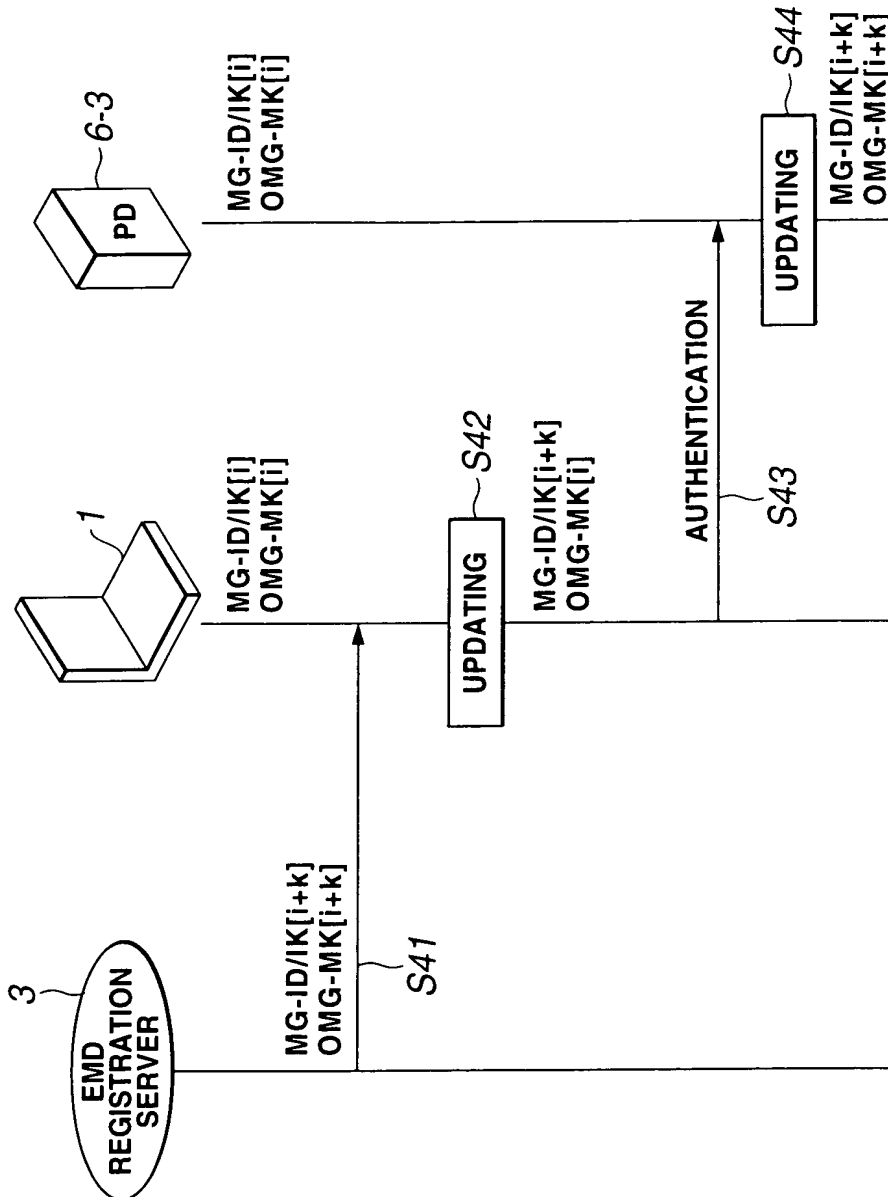


FIG.30

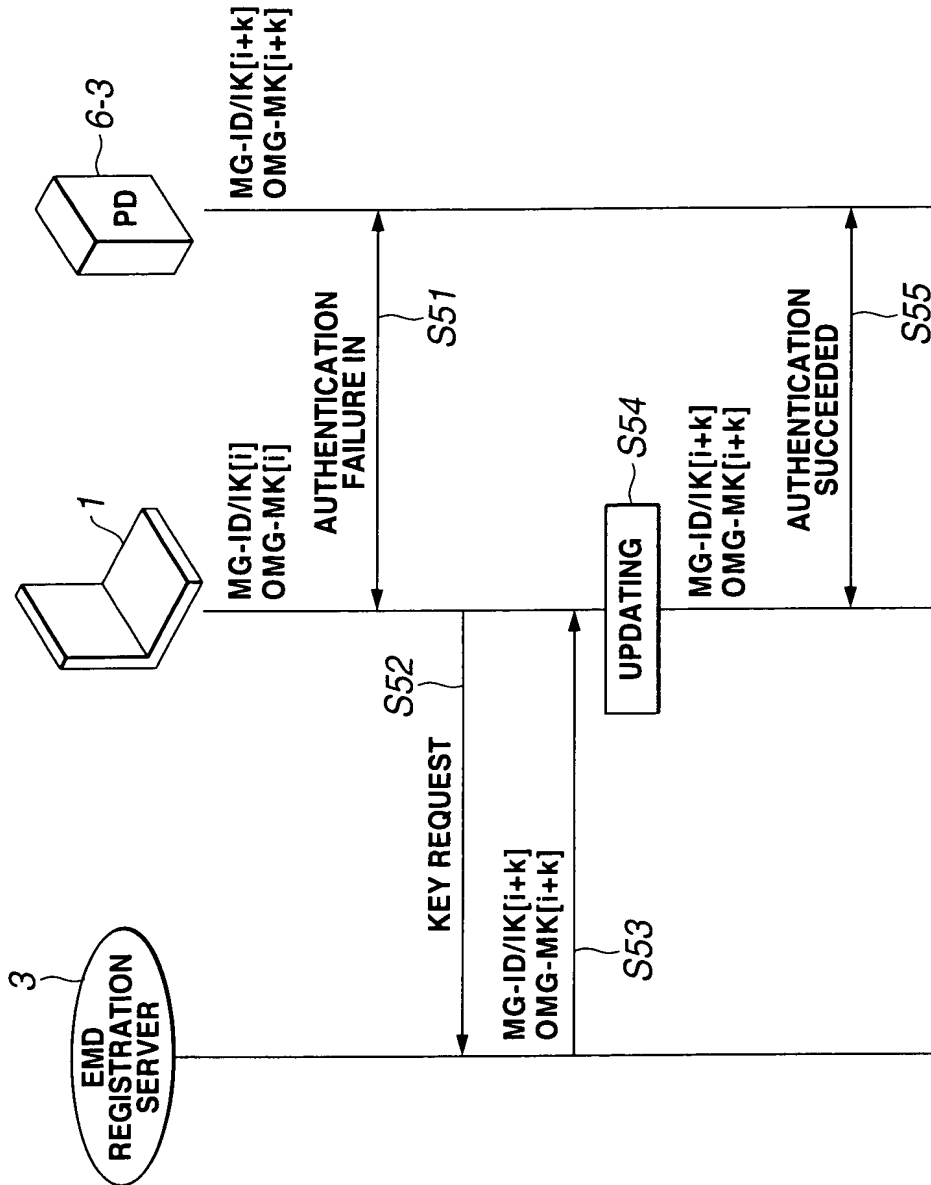


FIG.31